

**REMARKS**

The following claims are pending in the application: 11, 20, and 39 – 91

The following claims have been amended:

The following claims have been deleted:

The following claims have been added:

As a result of the foregoing Amendment, the following claims remain pending in the application: 11, 20, and 39 – 91.

**The Rejection Under 35 U.S.C. §112, second paragraph**

The Examiner rejects claims 11, 20, 39 – 49, and 51 – 63 as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, the Examiner states that in each of the independent claims, the “segregated” quantum structure is not clear as the term “segregated” implies a process of making, where something, for example, segregates out or separates from a matrix. The Examiner further states that page 1, paragraphs 0004 and 0005 contribute to the confusion by stating that the term “segregated quantum structure” is synonymous with quantum dot because that term is understood as a simple structural description where the structure could be made by any number of ways, some not including any segregation step(s). Therefore, opines the Examiner, “segregated” could mean simply “physically distinct”, in the sense that a quantum dot structure could be identified as a structure distinct from its surroundings. Thus, it is not clear whether the claim limitation “segregated quantum structure” refers to a structure having the properties of a quantum dot, which is made by a segregation process, or

whether the claim limitation “segregated quantum structure” is intended to encompass any structure having quantum dot properties, no matter how it is made.

Applicant respectfully submits that as used in US Application No. 10/649,046, the term “segregated quantum structure” is synonymous with “quantum dot” and that both terms are used in reference to “an isolated mass of material capable of holding an extra carrier”. See paragraph **[0004]** wherein it is described that in one embodiment, the segregated quantum structure will be encased in a shell of processed semiconductor material in all three dimensions. Applicant has amended paragraph **[0005]** to remove any ambiguity arising from the use of quantum dot or segregated quantum structure throughout the patent application. Thus, a segregated quantum structure is an isolated mass of material capable of holding an extra carrier produced from a quantum well. See paragraph **[0006]** wherein it is described that the quantum well is the precursor to the segregated quantum structure.

**CONCLUSION**

In view of the foregoing amendment and accompanying remarks, the Applicant respectfully submits that the present application is properly in condition for allowance and may be passed to issuance upon payment of the appropriate fees.

Telephone inquiry to the undersigned in order to clarify or otherwise expedite prosecution of the subject application is respectfully encouraged.

Respectfully submitted,

PAUL R. BERGER

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By: Michael Stonebrook  
Michael Stonebrook  
Registration No.: 53,851  
Standley Law Group LLP  
495 Metro Place South, Suite 210  
Dublin, Ohio 43017-5319  
Telephone: (614) 792-5555  
Facsimile: (614) 792-5536